

(No Model.)

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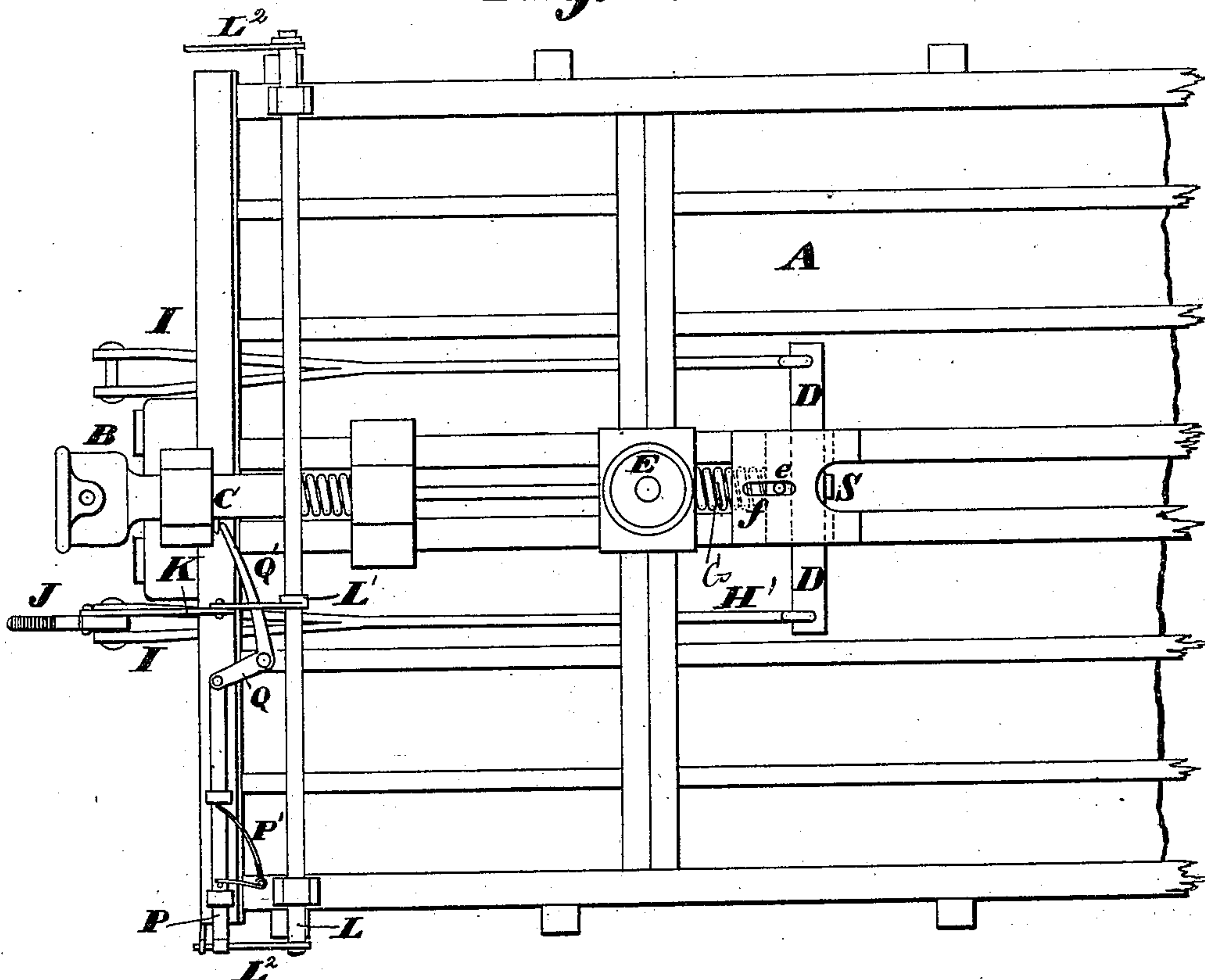
J. F. SCOTT.

## CAR COUPLING.

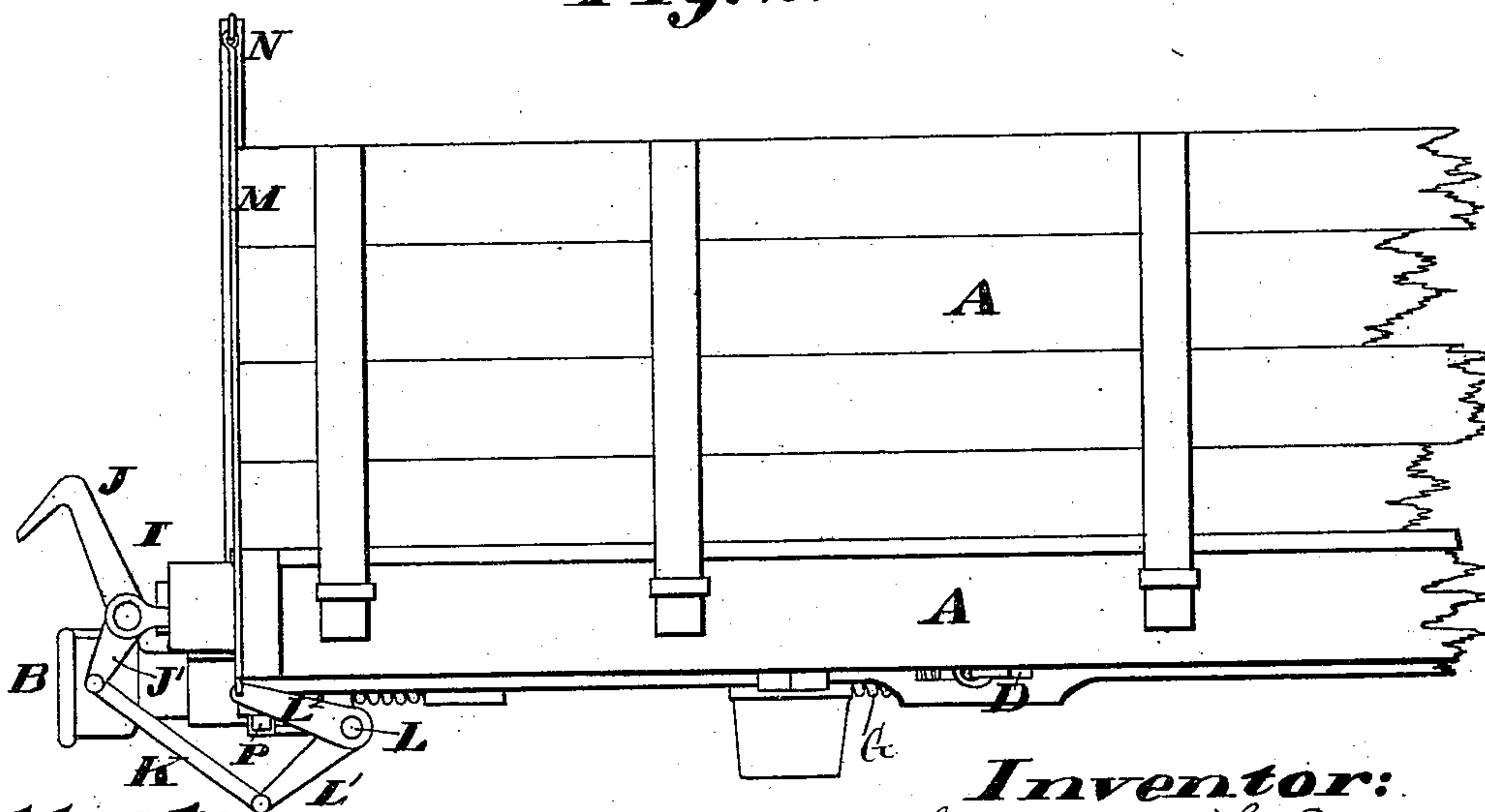
No. 313,378.

Patented Mar. 3, 1885.

*Fig. I.*



*Fig. 2.*



**Attest:**

Edward Steers  
" Victor A. Lewis

***Inventor:***

Jeremiah F. Scott  
By Knight Bro.  
Atty. S.

(No Model.)

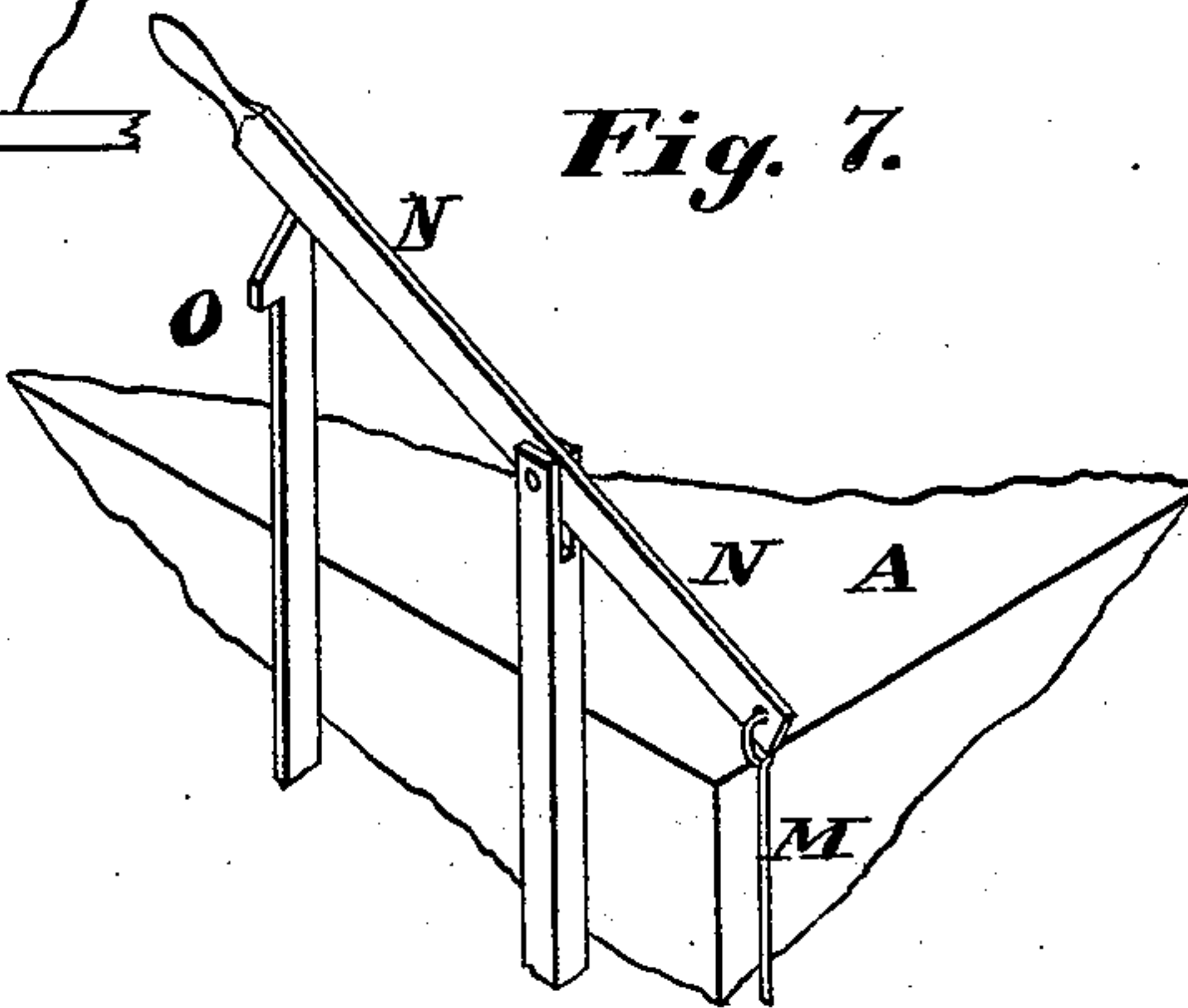
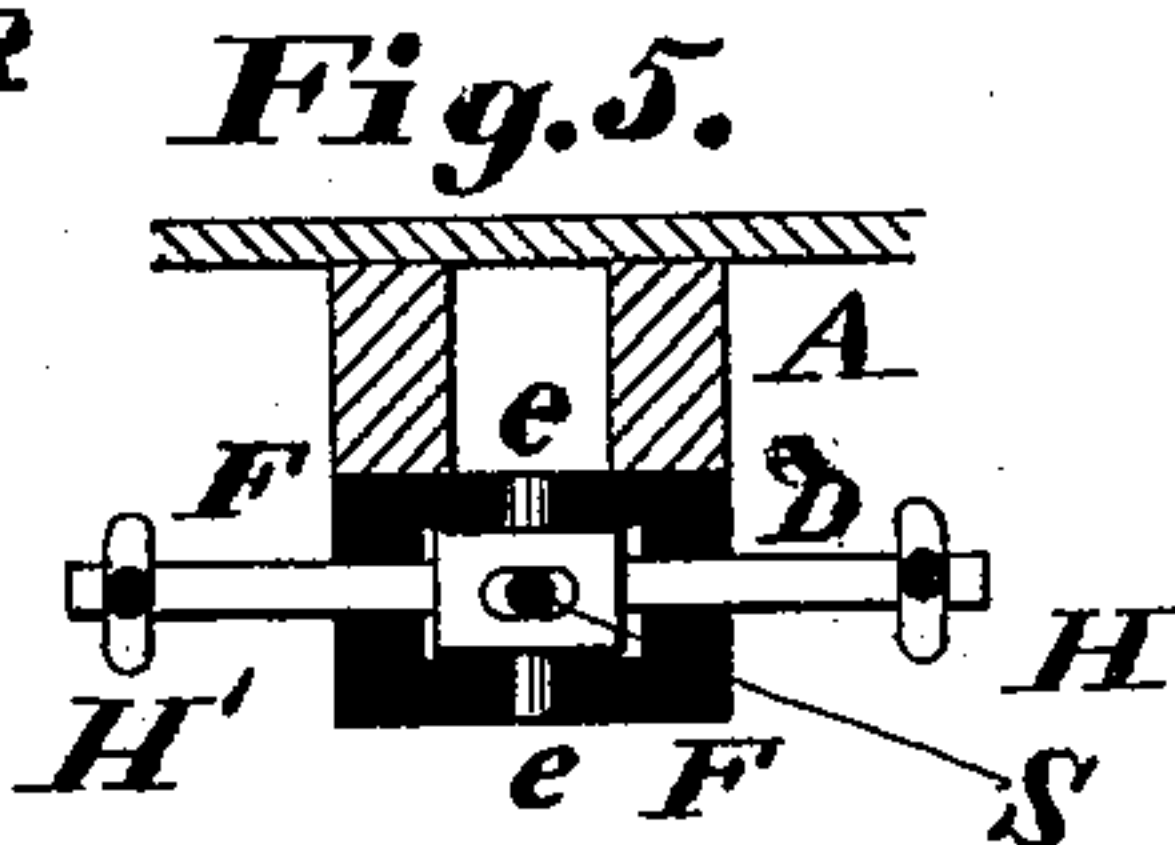
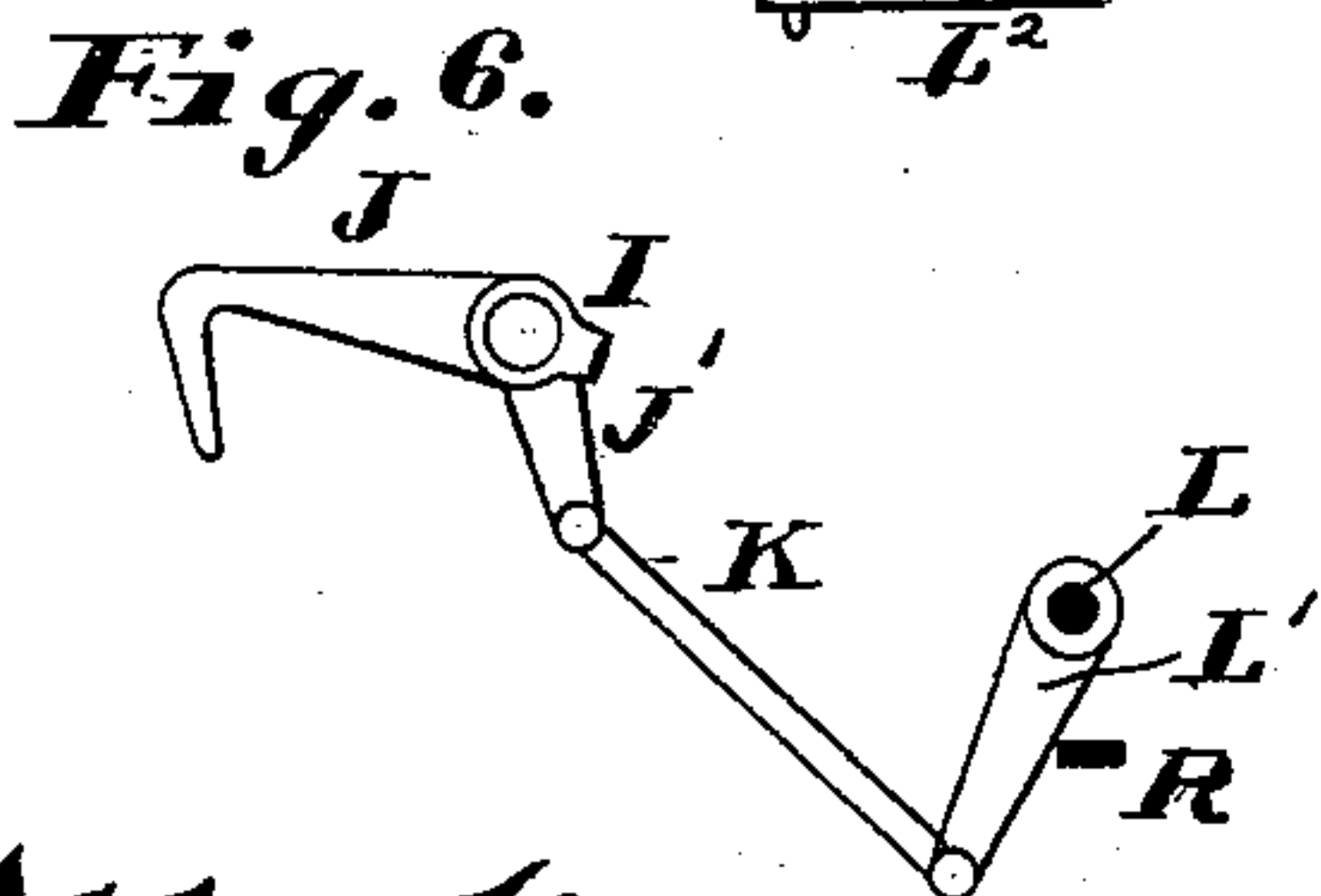
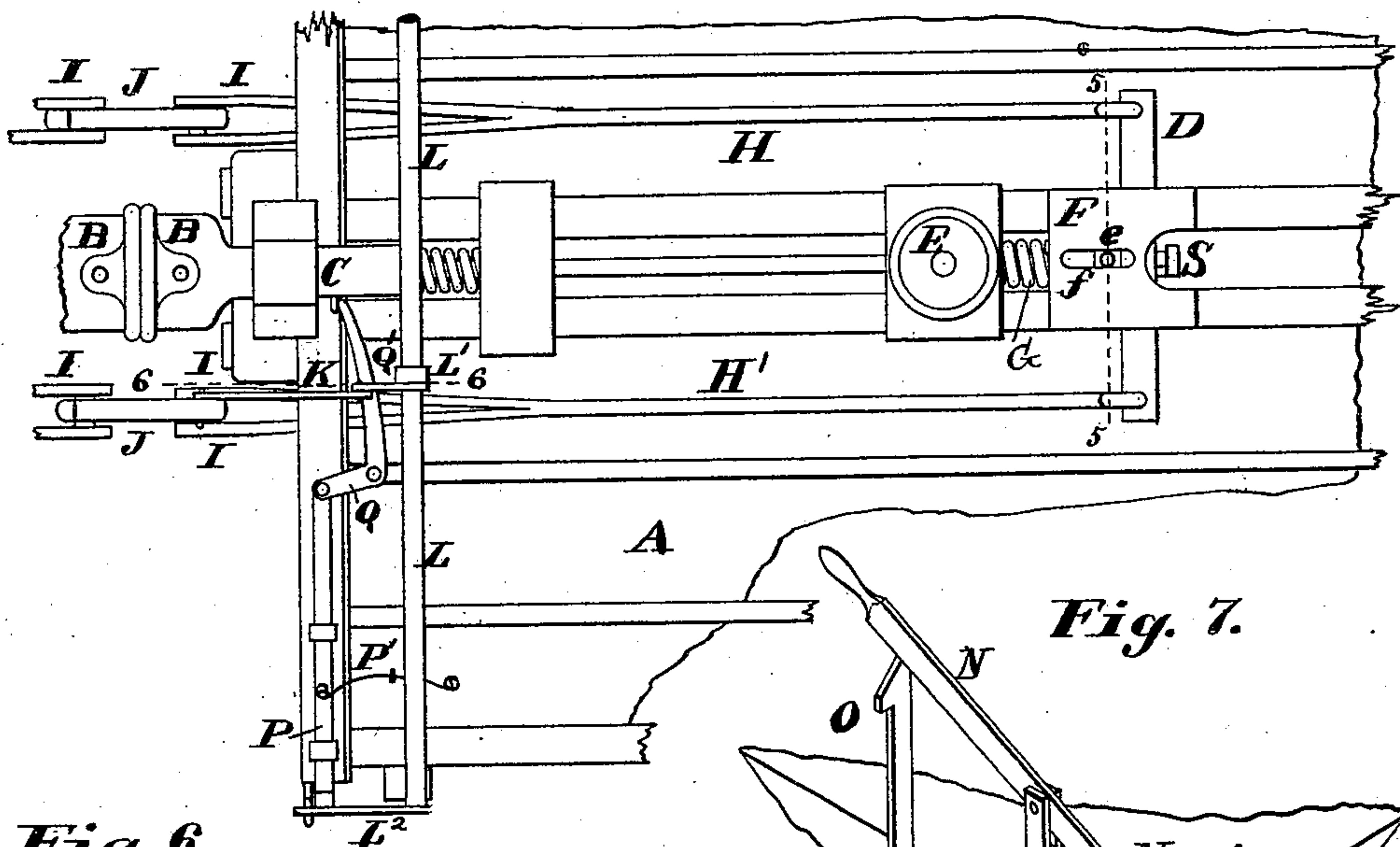
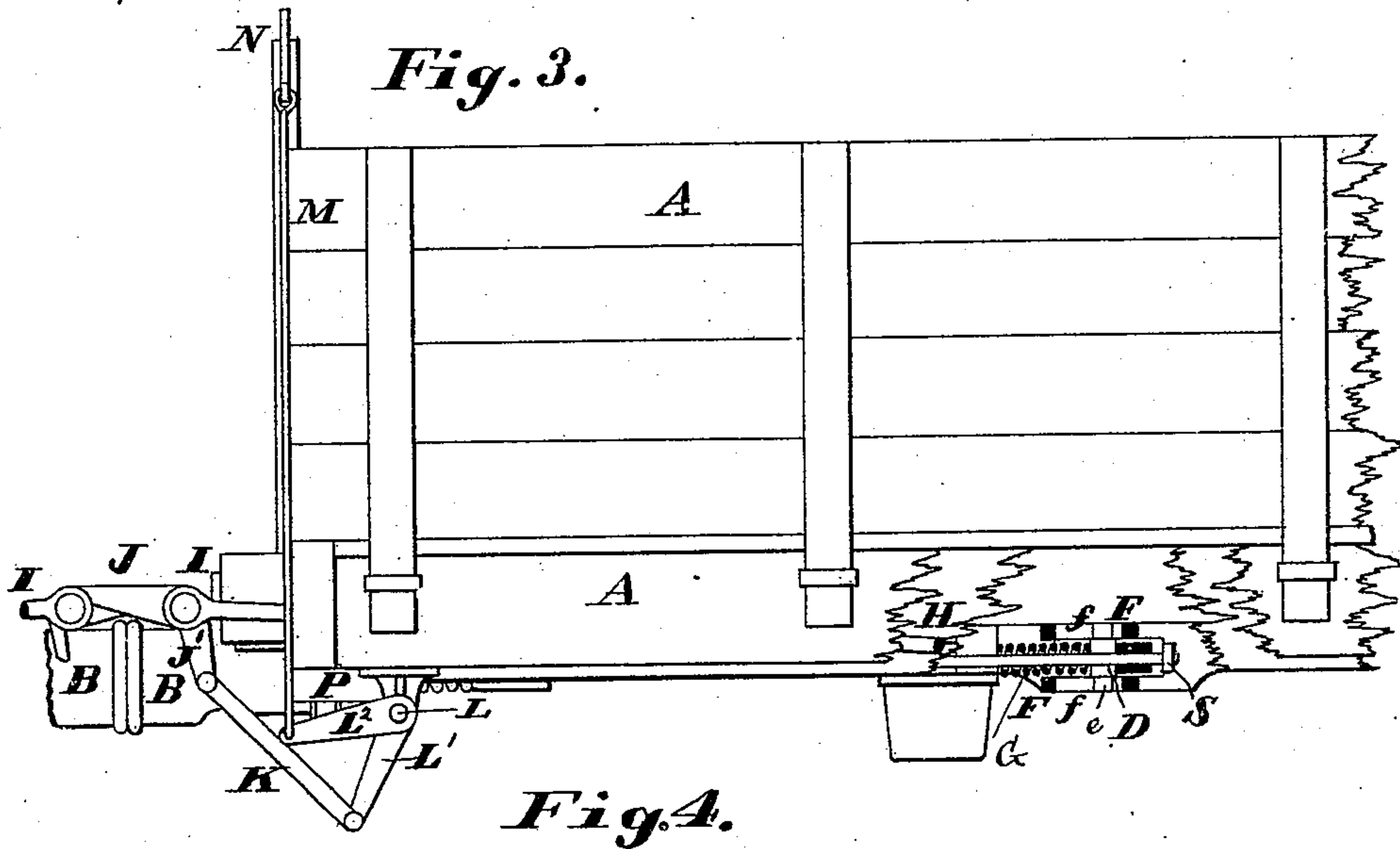
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# UNITED STATES PATENT OFFICE.

JEREMIAH F. SCOTT, OF JEFFERSON CITY, MISSOURI, ASSIGNOR OF THREE-FOURTHS TO JOHN N. HUMPHREY AND PHILLIP W. LORENZ, BOTH OF SAME PLACE, AND JAMES MCGUIRE, OF FULTON, MISSOURI.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 313,378, dated March 3, 1885.

Application filed August 4, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, JEREMIAH F. SCOTT, of Jefferson City, Cole county, Missouri, have invented a certain new and useful Improvement in Automatic Car-Couplings, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

This improvement relates to that class of car-couplings in which each car carries at each end a hook and a loop, the hook of each car engaging the loop of the other.

The improvement also relates to those couplings in which hooks and loops are placed at the ends of rods connected to a double-tree.

My invention consists in certain details of construction, hereinafter described, and pointed out in the claims.

Figure 1 is a bottom view of an end portion of a car-body; and Fig. 2 is a side view of same, showing the coupling disengaged. Fig. 3 is a side view showing the coupling engaged. Fig. 4 is a detail bottom view. Fig. 5 is a transverse section at 5 5, Fig. 4. Fig. 6 is a diagram illustrating a device for supporting the coupling-hook in a horizontal position. Fig. 7 is a detail perspective view showing the hand-lever (on the car-body) for lifting the coupling-hook.

A part of a car-body is shown at A.

B may represent an ordinary draw-head.

My device in no way interferes with the ordinary car-coupling, and, indeed, has no connection therewith, except that a stud, C, on the side of the draw-head is provided to withdraw the spring-bolt by which the coupling-hooks are held up in their elevated position.

D is a double-tree, placed, preferably, beyond the king-bolt E, that is more distant from the end of the car than said bolt. The double-tree turns on trunnions *e*, which have bearing in slots *f* of plates F, which are firmly fixed to the body of the car. Thus it will be seen that the double-tree has capacity for oscillation and longitudinal movement on the car. Between the double-tree and the block or timber in which the king-bolt has bearing is a strong spring, G, upon which the pulling-strain comes as the cars are drawn.

H H' are draw-rods connected to the ends of the double-tree, and extending through guides or bearings to the front of the car-body. Each draw-bar ends in a clevis, I, whose pin is horizontal. To one of these clevises is attached the coupling-hook J, while the other clevis or loop remains in condition to receive the coupling-hook of the next car. The coupling-hook has an arm, J', standing almost at right angles to the main bar of the hook. This arm is connected by a rod, K, to the arm L' of a rock-shaft, L. The arrangement is such that as the rock-shaft is turned the free end of the coupling-hook is moved upward and downward. The rock-shaft L carries at its end an arm, L<sup>2</sup>, which is clear of the side of the car, and this arm is connected by a rod, M, to one end of a lever, N, which is shown at the top of the car-body, so that it can be conveniently moved by any one riding on the car. The arm L<sup>2</sup> can be used by one standing upon either side of the car, there being, preferably, an arm, L<sup>2</sup>, at each end of the shaft, to lift the free end of the coupling-hook in uncoupling the car.

O is a catch by which the hand end of the lever N is held down when it is desired to sustain, by this means, the coupling-hook in its elevated position, as seen in Fig. 2.

I provide another and an automatically-operated means for holding the coupling-hook in its elevated position. This device consists of a spring-catch, P, which works beneath the end of the car, and which is pushed out by means of a spring, P', beneath the arm L<sup>2</sup> when it is elevated. The inner end of this spring bolt or catch is connected to the arm Q of a bell-crank lever whose other arm, Q', extends in near proximity to the draw-head.

C is a stud on the side of the draw-head, which, as the draw-head is forced inward, (as the cars come together,) impinges against the arm Q' of the lever, and draws back the spring bolt or catch P from beneath the arm L<sup>2</sup>, and allows the free end of the coupling-hook to drop and engage the clevis of the other car. The end of the catch P is beveled at the under side, so that the arm L<sup>2</sup>, when it is being drawn up, forces the catch backward by pressure against its beveled end.



As it is never necessary that the coupling-hook should descend much below a horizontal position, and as when in this position the hook, on striking the clevis, will be thrown up and drop into engagement, it is proper to have some device for sustaining the hook in this position. For this purpose I have a stud, R, projecting from one of the car-timbers, against which the inner edge of the arm L' impinges when the coupling-hook reaches the horizontal position, or thereabout. Where there is no draw-head upon the car, a bumper should be provided to work the spring-catch P, in substantially the manner set forth.

S is a rod extending inwardly from the draw-head through the trunnion-block of the double-tree or equalizer.

It will be understood that when the cars are running on a curved track the double-tree or equalizer would be turned somewhat upon its trunnions, thus equalizing the strain upon the two coupling-hooks.

I claim as my invention—

1. The combination of the two draw-rods, an equalizer-bar having trunnions, and to which the draw-rods are connected, the plates having slots in which the trunnions play, the king-bolt block, and a spring located between the equalizer-bar and the king-bolt block, as set forth.

2. The combination of a draw-head, two draw-rods, equalizer-bar, king-bolt block, spring between the equalizer-bar and the king-bolt block, and a rod extending through the equalizer-bar, the spring, and the king-bolt block to the draw-head, as set forth.

3. The combination of a draw-head, two draw-rods, equalizer-bar having trunnions, slotted trunnion-plates, block, king-bolt, spring between equalizer-bar and block, and a rod extending from the draw-head through the block, spring, and equalizer-bar, as set forth.

4. The combination of a coupling-hook sup-

ported on a horizontal pintle, downwardly-extending arm thereon, connected to the arm of a rock-shaft extending transversely beneath the end of the car-body, and a stud upon the car-body, arresting the backward movement of the arm of the rock-shaft, and consequently the downward movement of the coupling-hook, substantially as and for the purpose set forth.

5. The combination, in a car-coupling, of a coupling-hook with an arm depending therefrom, and an oscillatory arm connected by a rod with the arm of the coupling-hook, and a stud upon the car-body, arranged to arrest the backward movement of the oscillatory arm and sustain the coupling-hook in coupling position.

6. The combination of a coupling-hook having an arm depending therefrom, a rock-shaft having two arms, a rod connecting a rock-shaft arm with the hook-arm, and a spring-bolt engaging beneath the other arm of the rock-shaft, to sustain the hook.

7. The combination, in a car-coupling, of a coupling-hook with an arm depending therefrom, a rock-shaft with an arm connected with the former arm, a spring-catch engaging an arm upon the rock-shaft, a lever connected with the spring-catch, and a spring-bumper or draw-head having a projection or shoulder engaging the lever, to withdraw the spring-catch and allow the coupling-hook to descend, substantially as and for the purpose set forth.

8. The combination of a coupling-hook having an arm depending therefrom, a rock-shaft having arms, a rod connecting an arm of the rock-shaft with the arm of the hook, a lever fulcrumed to the car-body, and a rod connecting the other arm of the rock-shaft with the lever.

JEREMIAH F. SCOTT.

Witnesses:

GEO. L. HAGER,  
W. H. LUSK.